Journal of Testing and Evaluation
Author Index to Volume 32
2004

Number	Month of Issue	Pages
1	January	1–80
2	March	81–166
3	May	167–254
4	July	255–340
5	September	341–420
6	November	421–507

A

Abrams, M, Shen, J, and Green, D: Residual Stress Measurement in Ion-Exchanged Glass by Iterated Birefringence and Etching, May, 227

Achar, DR: *see* Singh, PJ, Thomas, G, Guha, B, and Achar, DR

Andersen, PC: *see* Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD

Astakhov, VP: An Application of the Random Balance Method in Conjunction with the Plackett-Burman Screening Design in Metal Cutting, Jan., 32

Aydilek, AH and Kutay, ME: Development of an Innovative Computer-Controlled Water Deairing System for Hydraulic Testing of Geosynthetics, March, 161

B

Banthia, N and Mindess, S: Toughness Characterization of Fiber-Reinforced Concrete: Which Standard to Use?, March, 138

Beghini, M and Bertini, L: Residual Stress Measurement and Modeling by the Initial Strain Distribution Method: Part I—Theory, May, 167

Beghini, M, Bertini, L, and Valentini, R: Residual Stress Measurement and Modeling by the Initial Strain Distribution Method: Part II—Application to Cladded Plates with Different Heat Treatments, May, 177

Bernal, C: *see* Guardiola, M, Bernal, C, Martinez, R, and Cassanelli, A

Bertini, L:
see Beghini, M and Bertini, L
see Beghini, M, Bertini, L, and Valentini, R

Brownjohn, J: *see* Xia, PQ and Brownjohn, J

Burgess, G:
see Singh, JP, Burgess, G, and Mingerink, C
see Singh, SP, Burgess, G, and Singh, J

Burgess, GJ: *see* Singh, SP, Burgess, GJ, and Singh, J

C

Carter, EJ: *see* Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD

Carvalho, M: *see* Vilar, O and Carvalho, M

Cassanelli, A: *see* Guardiola, M, Bernal, C, Martinez, R, and Cassanelli, A

Celik, ON: Porosity of Asphalt Concrete Made with Waste Shredded-Tire-Rubber-Modified Binders, Jan., 1

Chang, HO: *see* Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL

Chaouadi, R: An Energy-Based Crack Extension Formulation for Crack Resistance Characterization of Ductile Materials, Nov., 469

Chen, J: *see* Zhou, L and Chen, J

Chen, LC: *see* Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL

Chen, SP and van der Zwaag, S: A Comparative Finite-Element Study of Hot Rolling and Plane Strain Compression Testing of AA1050, July, 290

Cherouat, A: *see* Montay, G, Cherouat, A, Garnier, C, and Lu, J

Chonhenchob, V and Singh, SP: Testing and Comparison of Various Packages for Mango Distribution, Jan., 69

Choo, YS: *see* Liu, Y, Fwa, TF, and Choo, YS

Chowdhury, A: *see* Helwany, S and Chowdhury, A

Colak, OU: Mechanical Behavior of Polymers PBXW-128 and PBXN-110 Under Uniaxial and Multiaxial Compression at Different Strain Rates and Temperatures, Sept., 390

Cottineau, L: *see* Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J

D

Daum, MP: Combining a Fatigue Model With a Shock Response Spectrum Algorithm, Sept., 412

Desroche, J: *see* Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J

Divinsky, M: Comparative Statistical Analysis of Original and Aged Bituminous Material Viscosity, Sept., 396

E

Ekblad, J: *see* Lundstrom, R, Ekblad, J, and Isacsson, U

Embree, TL and Segall, AE: Evaluation of the Uniaxiality of the Stress State in C-Ring Fracture Strength Specimens, March, 153

Erinjeri, J: *see* Katz, M, Witriol, N, and Erinjeri, J

Eskner, M and Sandstrom, R: Mechanical Property Evaluation Using the Small Punch Test, July, 282

F

Fwa, TF: *see* Liu, Y, Fwa, TF, and Choo, YS

G

Garnier, C: *see* Montay, G, Cherouat, A, Garnier, C, and Lu, J

Green, D: *see* Abrams, M, Shen, J, and Green, D

Guardiola, M, Bernal, C, Martinez, R, and Cassanelli, A: The Use of an Alternative Method for Fracture Toughness Evaluation on Different Materials, Sept., 404

Guelorget, B: *see* Zhang, JM, Xu, KW, and Guelorget, B

Guha, B: *see* Singh, PJ, Thomas, G, Guha, B, and Achar, DR

H

Hachiya, Y: *see* Hao, P and Hachiya, Y

Hack, HP: Review of Steelwork Corrosion Control—Second Edition, July, 340

Han, LL: *see* Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL

Hao, P and Hachiya, Y: Evaluation Indicator of Asphalt Mixture Rutting Susceptibility, May, 194

Harada, T: *see* Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura
see Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura

Hashida, T: *see* Zhai, PC, Hashida, T, Komazaki, S, and Zhang, QJ

He, Q and Qian, Y: Characteristics of Macrodeformation Behavior of the Cycling Failure Specimens of a Fe-Cr-Ni Alloy Under In-phase and Out-of-phase Thermomechanical Fatigue, May, 250

Helwany, S and Chowdhury, A: Laboratory Impulse Tests for Soil-Underground Structure Interactions, July, 262

Hilton, H: Inverse Equivalent Elastic and Viscoelastic Loading Problems—Analytical and Computational Simulations of Experiments, Jan., 24

Holdsworth, SR, Mazza, E, and Jung, A: The Response of 1CrMoV Rotor Steel to Service-Cycle Thermomechanical Fatigue Testing, July, 255

I

Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J: Piezoelectric Sensors for Weigh-In-Motion Systems: An Experimental Insight into Edge Effects, Nov., 476

Isacsson, U: *see* Lundstrom, R, Ekblad, J, and Isacsson, U

Ismaeel, AA and Mathew, R: Time-Constrained Scheduling and Module Allocation for On-Line Testability in Pipelined Data Paths, March, 88

J

Jorgensen, GJ: A Phenomenological Approach to Obtaining Correlations between Accelerated and Outdoor Exposure Test Results of Organic Materials, Nov., 494

Jung, A: *see* Holdsworth, SR, Mazza, E, and Jung, A

K

Katz, M, Witriol, N, and Erinjeri, J: Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door, Nov., 421

Kerr, LN: *see* Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD

Kim, S: *see* Park, CK, Kim, S, and Yu, WR

Komazaki, S: *see* Zhai, PC, Hashida, T, Komazaki, S, and Zhang, QJ

Krishnaiah, S and Singh, DN: A Device for Determination of Thermal Properties of Soil, March, 114

Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D: Heat, Air, and Moisture Transport Properties of Several North American Bricks and Mortar Mixes, Sept., 383

Kutay, ME: *see* Aydilek, AH and Kutay, ME

L

Lackey, JC: *see* Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D

Larsson, PL: On the Mechanical Behavior of Global Parameters in Material Characterization by Sharp Indentation Testing, July, 310

Lee, SL: *see* Zhang, Swaddiwudhipong, S, and Lee, SL

Levenberg, E and Uzan, J: Quantifying the Confidence Levels of Deformation Measurements in Asphalt Concrete, Sept., 358

Li, S, Li, Y, Way, G, and Noureldin, S: Mechanistic-Empirical Characterization of Bonding Between Ultra-Thin Whitetopping and Asphalt Pavement, July, 274

Li, Y: *see* Li, S, Li, Y, Way, G, and Noureldin, S

Ling, HZ: *see* Xin, Q, Ling, HZ, and Long, TJ

Liu, Y, Fwa, TF, and Choo, YS: Effect of Surface Macrotexture on Skid Resistance Measurements by the British Pendulum Test, July, 304

Long, TJ: *see* Xin, Q, Ling, HZ, and Long, TJ

Lu, J: *see* Montay, G, Cherouat, A, Garnier, C, and Lu, J

Lucon, E, Scibetta, M, and van Walle, E: On the Possibility of Avoiding the Use of a Clip Gage When Testing Precracked Charpy-V Specimens in the Ductile-to-Brittle Transition Region, July, 334

Lundstrom, R, Ekblad, J, and Isacsson, U: Influence of Hysteretic Heating on Asphalt Fatigue Characterization, Nov., 484

M

Makabe, C, Purnowidodo, A, Sueyoshi, T, and Utsunomiya, T: Detecting Overload from Strain Information During Fatigue Crack Propagation Under Negative Stress Ratio, Jan., 56

Maragakis, E: *see* Vlassis, AG, Maragakis, E, and Saiidi, M

Martinez, R: *see* Guardiola, M, Bernal, C, Martinez, R, and Cassanelli, A

Mathew, R: *see* Ismaeel, AA and Mathew, R

Mazza, E: *see* Holdsworth, SR, Mazza, E, and Jung, A

McAffee, RP and Valsangkar, AJ: Geotechnical Properties of Compressible Materials Used for Induced Trench Construction, March, 143

McIlvain, LD: *see* Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD

Meged, Y: An Improved Method for Determination of the Cavitation Erosion Resistance by a Weibull Distribution, Sept., 373

Meged, Y: Modeling of Cumulative Mass Loss—Time Curves for Six Erosion Test Methods, Nov., 450

Merliot, E: *see* Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J

Mindess, S: *see* Banthia, N and Mindess, S

Mingerink, C: *see* Singh, JP, Burgess, G, and Mingerink, C

Montay, G, Cherouat, A, Garnier, C, and Lu, J: Determining Residual Stress in Spherical Components: A New Application of the Hole-Drilling Method, Jan., 73

N

Noda, NA and Takase, Y: Stress Concentration Factor Formulas Useful for Any Dimensions of Shoulder Fillet in a Flat Test Specimen Under Tension and Bending, May, 217

Noguchi, H: *see* Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura
see Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura

Normandin, N: *see* Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D

Noureldin, S: *see* Li, S, Li, Y, Way, G, and Noureldin, S

P

Pandey, RK: *see* Verma, BB and Pandey, RK

Park, CK, Kim, S, and Yu, WR: Quantitative Fabric Drape Evaluation System Using Image Processing Technology (Part 1: Measurement System and Geometric Model), March, 131

Pickett, JE: UV Absorber Permanence and Coating Lifetimes, May, 240

Purnowidodo, A: *see* Makabe, C, Purnowidodo, A, Sueyoshi, T, and Utsunomiya, T

Q

Qian, Y: *see* He, Q and Qian, Y

R

Rajeev, KP and Singh, DN: Instrumentation and Testing Methodology for Detecting Chloride Contaminants in Soils, March, 81

Rohini, K and Singh, DN: Methodology for Determination of Electrical Properties of Soils, Jan., 62

S

Saiidi, M: *see* Vlassis, AG, Maragakis, E, and Saiidi, M

Sandstrom, R: *see* Eskner, M and Sandstrom, R

Schuurmans, J: *see* Scibetta, M and Schuurmans, J

Scibetta, M and Schuurmans, J: Development and Qualification of an Algorithm for the Determination of the Initial Linear Portion of a Force Versus Displacement Record, Nov., 500

Scibetta, M: *see* Lucon, E, Scibetta, M, and van Walle, E

Segall, AE: *see* Embree, TL and Segall, AE

Shaheed, MS, Tarefder, RA, and Zaman, M: An Alternate Method to Determine Asphalt Content of Hot Mix Asphalt Using Volumetric Properties, July, 322

Shen, J: *see* Abrams, M, Shen, J, and Green, D

Singh, DN:
see Krishnaiah, S and Singh, DN
see Rajeev, KP and Singh, DN
see Rohini, K and Singh, DN

Singh, J:
see Singh, SP, Burgess, G, and Singh, J
see Singh, SP, Burgess, GJ, and Singh, J

Singh, JP, Burgess, G, and Mingerink, C: Measurement and Simulation of Damage to Long Light-Weight Packages in the FedEx 3-Day Saver Parcel Delivery Service, Sept., 341

Singh, PJ, Thomas, G, Guha, B, and Achar, DR: Monitoring Fatigue Crack Initiation and Propagation in Cruciform Joints Using Resistance-Type Gages, Jan., 40

Singh, S: *see* Trivedi, A and Singh, S

Singh, SP, Burgess, G, and Singh, J: Measurement and Analysis of Small and Light Weight Parcel Shipping Environment, Sept., 351

Singh, SP, Burgess, GJ, and Singh, J: A New Test Method and Pictorial Markings for Packages Containing Liquid Dangerous Goods in High Altitude Shipments, Sept., 417

Singh, SP: *see* Chonhenchob, V and Singh, SP

Stroup-Gardiner, M, Studdard, J, and Wagner, C: Evaluation of Hot Mix Asphalt Macro- and Micro-Texture, Jan., 7

Studdard, J: *see* Stroup-Gardiner, M, Studdard, J, and Wagner, C

Sueyoshi, T: *see* Makabe, C, Purnowidodo, A, Sueyoshi, T, and Utsunomiya, T

Swaddiwudhipong, S: *see* Zhang, Swaddiwudhipong, S, and Lee, SL

T

Takase, Y: *see* Noda, NA and Takase, Y

Tarefder, RA: *see* Shaheed, MS, Tarefder, RA, and Zaman, M

Tariku, F: *see* Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D

Thomas, G: *see* Singh, PJ, Thomas, G, Guha, B, and Achar, DR

Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD: Water Testing Natural Rubber Latex Condoms: A Comparison of Surveillance Test Methods, May, 202

Trivedi, A and Singh, S: Cone Resistance of Compacted Ash Fill, Nov., 429

Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL: Study on Frequency Response of Control Components in a Pneumatic System, Jan., 46

U

Utsunomiya, T: *see* Makabe, C, Purnowidodo, A, Sueyoshi, T, and Utsunomiya, T

Uzan, J: *see* Levenberg, E and Uzan, J

V

Valentini, R: *see* Beghini, M, Bertini, L, and Valentini, R

Valsangkar, AJ: *see* McAffee, RP and Valsangkar, AJ

van der Zwaag, S: *see* Chen, SP and van der Zwaag, S

van Reenen, D: *see* Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D

van Walle, E: *see* Lucon, E, Scibetta, M, and van Walle, E

Verma, BB and Pandey, RK: Fatigue Crack Closure and Crack Growth Following an Overload, Nov., 462

Vilar, O and Carvalho, M: Mechanical Properties of Municipal Solid Waste, Nov., 438

Vlassis, AG, Maragakis, E, and Saiidi, M: Experimental Evaluation of Longitudinal Seismic Performance of Bridge Restrainers at In-Span Hinges, March, 96

W

Wagner, C: *see* Stroup-Gardiner, M, Studdard, J, and Wagner, C

Way, G: *see* Li, S, Li, Y, Way, G, and Noureldin, S

Witriol, N: *see* Katz, M, Witriol, N, and Erinjeri, J

Wu, JL: *see* Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL

X

Xia, PQ and Brownjohn, J: Load-Carrying Capacity Evaluation of Damaged Reinforced Concrete Structures by Dynamic Testing and Finite-Element Model Updating, Sept., 366

Xin, Q, Ling, HZ, and Long, TJ: Application of Magnetoelastic Technology to the Measurement of Stresses in Rails for High-Speed Trains, May, 234

Xu, KW: *see* Zhang, JM, Xu, KW, and Guelorget, B

Y

Yeheskel, O: Nondestructive Evaluation of the Dynamic Elastic Moduli of Porous Iron Compacts, Jan., 17

Yoshimura: *see* Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura
see Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura

Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura: Three-Dimensional Crack Detection Method for Structures Using Simulated Strain Gages and the Body Force Method, March, 106

Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura: Estimation of Stress Field Near a Notch Root of 3-D Structures with a Few Strain Data and the Body Force Method, May, 184

Yu, WR: *see* Park, CK, Kim, S, and Yu, WR

Z

Zaman, M: *see* Shaheed, MS, Tarefder, RA, and Zaman, M

Zhai, PC, Hashida, T, Komazaki, S, and Zhang, QJ: Numerical Analysis for Small Punch Creep Tests by Finite-Element Method, July, 298

Zhang, Swaddiwudhipong, S, and Lee, SL: Parametric Study on Cement Grout and Aggregate Media for Preplaced Aggregate Grouting, March, 120

Zhang, JM, Xu, KW, and Guelorget, B: Effect of Loading Schemes on the Depth-Sensing Indentation Tests, Nov., 504

Zhang, QJ: *see* Zhai, PC, Hashida, T, Komazaki, S, and Zhang, QJ

Zhou, L and Chen, J: Some Problems in the Measurement of Dynamic Modulus of Viscoelastic Model Materials, May, 246

Journal of Testing and Evaluation
Subject Index to Volume 32
2004

A

Abrasion test method
Modeling of Cumulative Mass Loss—Time Curves for Six Erosion Test Methods (Meged, Y), Nov., 450

Accelerated testing
A Phenomenological Approach to Obtaining Correlations between Accelerated and Outdoor Exposure Test Results of Organic Materials (Jorgensen, GJ), Nov., 494

Air transport
A New Test Method and Pictorial Markings for Packages Containing Liquid Dangerous Goods in High Altitude Shipments (Singh, SP, Burgess, GJ, and Singh, J), Sept., 417

Air voids
Porosity of Asphalt Concrete Made with Waste Shredded-Tire-Rubber-Modified Binders (Celik, ON), Jan., 1

Allocation
Time-Constrained Scheduling and Module Allocation for On-Line Testability in Pipelined Data Paths (Ismaeel, AA and Mathew, R), March, 88

Asphalt content
An Alternate Method to Determine Asphalt Content of Hot Mix Asphalt Using Volumetric Properties (Shaheed, MS, Tarefder, RA, and Zaman, M), July, 322

Asphalt mixtures
Evaluation Indicator of Asphalt Mixture Rutting Susceptibility (Hao, P and Hachiya, Y), May, 194

Asphalt pavement
Evaluation of Hot Mix Asphalt Macro- and Micro-Texture (Stroup-Gardiner, M, Studdard, J, and Wagner, C), Jan., 7
Mechanistic-Empirical Characterization of Bonding Between Ultra-Thin Whitetopping and Asphalt Pavement (Li, S, Li, Y, Way, G, and Noureldin, S), July, 274

Attic pressure
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

Attic-to-home pressure-coupling ratio
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

Automated performance testing equipment
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

B

Beams
Inverse Equivalent Elastic and Viscoelastic Loading Problems—Analytical and Computational Simulations of Experiments (Hilton, H), Jan., 24

Bituminous materials
Comparative Statistical Analysis of Original and Aged Bituminous Material Viscosity (Divinsky, M), Sept., 396

Body Force Method
Estimation of Stress Field Near a Notch Root of 3-D Structures with a Few Strain Data and the Body Force Method (Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura), May, 184

Brick
Heat, Air, and Moisture Transport Properties of Several North American Bricks and Mortar Mixes (Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D), Sept., 383

British pendulum test
Effect of Surface Macrotexture on Skid Resistance Measurements by the British Pendulum Test (Liu, Y, Fwa, TF, and Choo, YS), July, 304

C

Cavitance
An Improved Method for Determination of the Cavitation Erosion Resistance by a Weibull Distribution (Meged, Y), Sept., 373

Cavitation erosion resistance
An Improved Method for Determination of the Cavitation Erosion Resistance by a Weibull Distribution (Meged, Y), Sept., 373

Cement grout
Parametric Study on Cement Grout and Aggregate Media for Preplaced Aggregate Grouting (Zhang, Swaddiwudhipong, S, and Lee, SL), March, 120

Coal ash
Cone Resistance of Compacted Ash Fill (Trivedi, A and Singh, S), Nov., 429

Compressible material
Geotechnical Properties of Compressible Materials Used for Induced Trench Construction (McAffee, RP and Valsangkar, AJ), March, 143

Compression
Mechanical Behavior of Polymers PBXW-128 and PBXN-110 Under Uniaxial and Multiaxial Compression at Different Strain Rates and Temperatures (Colak, OU), Sept., 390

Computational simulations
Inverse Equivalent Elastic and Viscoelastic Loading Problems—Analytical and Computational Simulations of Experiments (Hilton, H), Jan., 24

Concrete
Quantifying the Confidence Levels of Deformation Measurements in Asphalt Concrete (Levenberg, E and Uzan, J), Sept., 358
Toughness Characterization of Fiber-Reinforced Concrete: Which Standard to Use? (Banthia, N and Mindess, S), March, 138

Condoms
Water Testing Natural Rubber Latex Condoms: A Comparison of Surveillance Test Methods (Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD), May, 202

Contaminants
Instrumentation and Testing Methodology for Detecting Chloride Contaminants in Soils (Rajeev, KP and Singh, DN), March, 81

Crack detection
Three-Dimensional Crack Detection Method for Structures Using Simulated Strain Gages and the Body Force Method (Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura), March, 106

Crack growth retardation
Fatigue Crack Closure and Crack Growth Following an Overload (Verma, BB and Pandey, RK), Nov., 462

Crack resistance
An Energy-Based Crack Extension Formulation for Crack Resistance Characterization of Ductile Materials (Chaouadi, R), Nov., 469

Creep properties
Numerical Analysis for Small Punch Creep Tests by Finite-Element Method (Zhai, PC, Hashida, T, Komazaki, S, and Zhang, QJ), July, 298

C-Ring
Evaluation of the Uniaxiality of the Stress State in C-Ring Fracture Strength Specimens (Embree, TL and Segall, AE), March, 153

Cruciform joints
Monitoring Fatigue Crack Initiation and Propagation in Cruciform Joints Using Resistance-Type Gages (Singh, PJ, Thomas, G, Guha, B, and Achar, DR), Jan., 40

Cumulative erosion-time curve
Modeling of Cumulative Mass Loss—Time Curves for Six Erosion Test Methods (Meged, Y), Nov., 450

D

Deformation
Quantifying the Confidence Levels of Deformation Measurements in Asphalt Concrete (Levenberg, E and Uzan, J), Sept., 358

Depth-sensing indentation test
Effect of Loading Schemes on the Depth-Sensing Indentation Tests (Zhang, JM, Xu, KW, and Guelorget, B), Nov., 504

Design of experiments
An Application of the Random Balance Method in Conjunction with the Plackett-Burman Screening Design in Metal Cutting (Astakhov, VP), Jan., 32

Drape
Quantitative Fabric Drape Evaluation System Using Image Processing Technology (Part 1: Measurement System and Geometric Model) (Park, CK, Kim, S, and Yu, WR), March, 131

Drops
Measurement and Simulation of Damage to Long Light-Weight Packages in the FedEx 3-Day Saver Parcel Delivery Service (Singh, JP, Burgess, G, and Mingerink, C), Sept., 341

Duct leakage
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

Ductile
Combining a Fatigue Model With a Shock Response Spectrum Algorithm (Daum, MP), Sept., 412

E

Edge effect
Piezoelectric Sensors for Weigh-In-Motion Systems: An Experimental Insight into Edge Effects (Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J), Nov., 476

Elastic modulas
Nondestructive Evaluation of the Dynamic Elastic Moduli of Porous Iron Compacts (Yeheskel, O), Jan., 17

Electrical resistivity
Methodology for Determination of Electrical Properties of Soils (Rohini, K and Singh, DN), Jan., 62

Energy efficiency
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

Erosion test methods
Modeling of Cumulative Mass Loss—Time Curves for Six Erosion Test Methods (Meged, Y), Nov., 450

F

Fatigue
Combining a Fatigue Model With a Shock Response Spectrum Algorithm (Daum, MP), Sept., 412
Detecting Overload from Strain Information During Fatigue Crack Propagation Under Negative Stress Ratio (Makabe, C, Purnowidodo, A, Sueyoshi, T, and Utsunomiya, T), Jan., 56
Influence of Hysteretic Heating on Asphalt Fatigue Characterization (Lundstrom, R, Ekblad, J, and Isacsson, U), Nov., 484

Fatigue crack
Monitoring Fatigue Crack Initiation and Propagation in Cruciform Joints Using Resistance-Type Gages (Singh, PJ, Thomas, G, Guha, B, and Achar, DR), Jan., 40

Fatigue crack closure
Fatigue Crack Closure and Crack Growth Following an Overload (Verma, BB and Pandey, RK), Nov., 462

Finite-element analysis
Numerical Analysis for Small Punch Creep Tests by Finite-Element Method (Zhai, PC, Hashida, T, Komazaki, S, and Zhang, QJ), July, 298

Fracture strength
Evaluation of the Uniaxiality of the Stress State in C-Ring Fracture Strength Specimens (Embree, TL and Segall, AE), March, 153

Fracture toughness
On the Possibility of Avoiding the Use of a Clip Gage When Testing Precracked Charpy-V Specimens in the Ductile-to-Brittle Transition Region (Lucon, E, Scibetta, M, and van Walle, E), July, 334
The Use of an Alternative Method for Fracture Toughness Evaluation on Different Materials (Guardiola, M, Bernal, C, Martinez, R, and Cassanelli, A), Sept., 404

Frequency responses
Study on Frequency Response of Control Components in a Pneumatic System (Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL), Jan., 46

G

Geosynthetics
Development of an Innovative Computer-Controlled Water Deairing System for Hydraulic Testing of Geosynthetics (Aydilek, AH and Kutay, ME), March, 161

H

Hole-drilling method
Determining Residual Stress in Spherical Components: A New Application of the Hole-Drilling Method (Montay, G, Cherouat, A, Garnier, C, and Lu, J), Jan., 73

Hot mix asphalt
An Alternate Method to Determine Asphalt Content of Hot Mix Asphalt Using Volumetric Properties (Shaheed, MS, Tarefder, RA, and Zaman, M), July, 322

Hot Rolling
A Comparative Finite-Element Study of Hot Rolling and Plane Strain Compression Testing of AA1050 (Chen, SP and van der Zwaag, S), July, 290

House leakiness
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

Hysteretic heating
Influence of Hysteretic Heating on Asphalt Fatigue Characterization (Lundstrom, R, Ekblad, J, and Isacsson, U), Nov., 484

I

Image analysis
Quantitative Fabric Drape Evaluation System Using Image Processing Technology (Part 1: Measurement System and Geometric Model) (Park, CK, Kim, S, and Yu, WR), March, 131

Impacts
Measurement and Analysis of Small and Light Weight Parcel Shipping Environment (Singh, SP, Burgess, G, and Singh, J), Sept., 351

Induced trench
Geotechnical Properties of Compressible Materials Used for Induced Trench Construction (McAffee, RP and Valsangkar, AJ), March, 143

Initial strain
Residual Stress Measurement and Modeling by the Initial Strain Distribution Method:

Part II—Application to Cladded Plates with Different Heat Treatments (Beghini, M, Bertini, L, and Valentini, R), May, 177

In-span hinges
Experimental Evaluation of Longitudinal Seismic Performance of Bridge Restrainers at In-Span Hinges (Vlassis, AG, Maragakis, E, and Saiidi, M), March, 96

Iron
Nondestructive Evaluation of the Dynamic Elastic Moduli of Porous Iron Compacts (Yeheskel, O), Jan., 17

J

J-R curve
An Energy-Based Crack Extension Formulation for Crack Resistance Characterization of Ductile Materials (Chaouadi, R), Nov., 469

L

Laboratory impulse tests
Laboratory Impulse Tests for Soil-Underground Structure Interactions (Helwany, S and Chowdhury, A), July, 262

Landfill
Mechanical Properties of Municipal Solid Waste (Vilar, O and Carvalho, M), Nov., 438

Lifetime prediction
UV Absorber Permanence and Coating Lifetimes (Pickett, JE), May, 240

Load-carrying capacity
Load-Carrying Capacity Evaluation of Damaged Reinforced Concrete Structures by Dynamic Testing and Finite-Element Model Updating (Xia, PQ and Brownjohn, J), Sept., 366

M

Macrodeformation
Characteristics of Macrodeformation Behavior of the Cycling Failure Specimens of a Fe-Cr-Ni Alloy Under In-phase and Out-of-phase Thermomechanical Fatigue (He, Q and Qian, Y), May, 250

Macrotexture
Evaluation of Hot Mix Asphalt Macro- and Micro-Texture (Stroup-Gardiner, M, Studdard, J, and Wagner, C), Jan., 7

Magnetoelastic
Application of Magnetoelastic Technology to the Measurement of Stresses in Rails for High-Speed Trains (Xin, Q, Ling, HZ, and Long, TJ), May, 234

Material characterization
On the Mechanical Behavior of Global Parameters in Material Characterization by Sharp Indentation Testing (Larsson, PL), July, 310

Measurement
Residual Stress Measurement and Modeling by the Initial Strain Distribution Method: Part I—Theory (Beghini, M and Bertini, L), May, 167

Mechanical testing
Development and Qualification of an Algorithm for the Determination of the Initial Linear Portion of a Force Versus Displacement Record (Scibetta, M and Schuurmans, J), Nov., 500

Model testing
Some Problems in the Measurement of Dynamic Modulus of Viscoelastic Model Materials (Zhou, L and Chen, J), May, 246

Modeling
Residual Stress Measurement and Modeling by the Initial Strain Distribution Method: Part I—Theory (Beghini, M and Bertini, L), May, 167

Mortar
Heat, Air, and Moisture Transport Properties of Several North American Bricks and Mortar Mixes (Kumaran, MK, Lackey, JC, Normandin, N, Tariku, F, and van Reenen, D), Sept., 383

Municipal solid waste
Mechanical Properties of Municipal Solid Waste (Vilar, O and Carvalho, M), Nov., 438

O

Organic materials
A Phenomenological Approach to Obtaining Correlations between Accelerated and Outdoor Exposure Test Results of Organic Materials (Jorgensen, GJ), Nov., 494

Outdoor testing
A Phenomenological Approach to Obtaining Correlations between Accelerated and Outdoor Exposure Test Results of Organic Materials (Jorgensen, GJ), Nov., 494

Overload
Fatigue Crack Closure and Crack Growth Following an Overload (Verma, BB and Pandey, RK), Nov., 462

P

Package
Measurement and Simulation of Damage to Long Light-Weight Packages in the FedEx 3-Day Saver Parcel Delivery Service (Singh, JP, Burgess, G, and Mingerink, C), Sept., 341

Packages
Measurement and Analysis of Small and Light Weight Parcel Shipping Environment (Singh, SP, Burgess, G, and Singh, J), Sept., 351

Packaging
A New Test Method and Pictorial Markings for Packages Containing Liquid Dangerous Goods in High Altitude Shipments (Singh, SP, Burgess, GJ, and Singh, J), Sept., 417
Testing and Comparison of Various Packages for Mango Distribution (Chonhenchob, V and Singh, SP), Jan., 69

Piezoelectric sensor
Piezoelectric Sensors for Weigh-In-Motion Systems: An Experimental Insight into Edge Effects (Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J), Nov., 476

Plackett-Burman
An Application of the Random Balance Method in Conjunction with the Plackett-Burman Screening Design in Metal Cutting (Astakhov, VP), Jan., 32

Plane strain compression
A Comparative Finite-Element Study of Hot Rolling and Plane Strain Compression Testing of AA1050 (Chen, SP and van der Zwaag, S), July, 290

Pneumatic system
Study on Frequency Response of Control Components in a Pneumatic System (Tsung, TT, Chang, HO, Chen, LC, Wu, JL, and Han, LL), Jan., 46

Polymeric materials
Mechanical Behavior of Polymers PBXW-128 and PBXN-110 Under Uniaxial and Multiaxial Compression at Different Strain Rates and Temperatures (Colak, OU), Sept., 390

Porosity
Porosity of Asphalt Concrete Made with Waste Shredded-Tire-Rubber-Modified Binders (Celik, ON), Jan., 1

Precracked Charpy specimens
On the Possibility of Avoiding the Use of a Clip Gage When Testing Precracked Charpy-V Specimens in the Ductile-to-Brittle Transition Region (Lucon, E, Scibetta, M, and van Walle, E), July, 334

Preplaced aggregate grouting
Parametric Study on Cement Grout and Aggregate Media for Preplaced Aggregate Grouting (Zhang, Swaddiwudhipong, S, and Lee, SL), March, 120

R

Rails
Application of Magnetoelastic Technology to the Measurement of Stresses in Rails for High-Speed Trains (Xin, Q, Ling, HZ, and Long, TJ), May, 234

Random balance method
An Application of the Random Balance Method in Conjunction with the

Plackett-Burman Screening Design in Metal Cutting (Astakhov, VP), Jan., 32

Reinforced concrete
Load-Carrying Capacity Evaluation of Damaged Reinforced Concrete Structures by Dynamic Testing and Finite-Element Model Updating (Xia, PQ and Brownjohn, J), Sept., 366

Relative density
Cone Resistance of Compacted Ash Fill (Trivedi, A and Singh, S), Nov., 429

Residual stress
Determining Residual Stress in Spherical Components: A New Application of the Hole-Drilling Method (Montay, G, Cherouat, A, Garnier, C, and Lu, J), Jan., 73
Residual Stress Measurement and Modeling by the Initial Strain Distribution Method: Part I—Theory (Beghini, M and Bertini, L), May, 167
Residual Stress Measurement and Modeling by the Initial Strain Distribution Method: Part II—Application to Cladded Plates with Different Heat Treatments (Beghini, M, Bertini, L, and Valentini, R), May, 177
Residual Stress Measurement in Ion-Exchanged Glass by Iterated Birefringence and Etching (Abrams, M, Shen, J, and Green, D), May, 227

Restrainers
Experimental Evaluation of Longitudinal Seismic Performance of Bridge Restrainers at In-Span Hinges (Vlassis, AG, Maragakis, E, and Saiidi, M), March, 96

Road surface
Effect of Surface Macrotexture on Skid Resistance Measurements by the British Pendulum Test (Liu, Y, Fwa, TF, and Choo, YS), July, 304

Rutting
Evaluation Indicator of Asphalt Mixture Rutting Susceptibility (Hao, P and Hachiya, Y), May, 194

S

Scheduling
Time-Constrained Scheduling and Module Allocation for On-Line Testability in Pipelined Data Paths (Ismaeel, AA and Mathew, R), March, 88

Sharp indentation
On the Mechanical Behavior of Global Parameters in Material Characterization by Sharp Indentation Testing (Larsson, PL), July, 310

Shoulder fillet
Stress Concentration Factor Formulas Useful for Any Dimensions of Shoulder Fillet in a Flat Test Specimen Under Tension and Bending (Noda, NA and Takase, Y), May, 217

Silty soil
Methodology for Determination of Electrical Properties of Soils (Rohini, K and Singh, DN), Jan., 62

Skid resistance
Evaluation of Hot Mix Asphalt Macro- and Micro-Texture (Stroup-Gardiner, M, Studdard, J, and Wagner, C), Jan., 7

Small punch test
Mechanical Property Evaluation Using the Small Punch Test (Eskner, M and Sandstrom, R), July, 282

Soil
A Device for Determination of Thermal Properties of Soil (Krishnaiah, S and Singh, DN), March, 114

Soil thermal property detector
A Device for Determination of Thermal Properties of Soil (Krishnaiah, S and Singh, DN), March, 114

Soils
Instrumentation and Testing Methodology for Detecting Chloride Contaminants in Soils (Rajeev, KP and Singh, DN), March, 81

Soil-structure interaction
Laboratory Impulse Tests for Soil-Underground Structure Interactions (Helwany, S and Chowdhury, A), July, 262

Sound velocity
Nondestructive Evaluation of the Dynamic Elastic Moduli of Porous Iron Compacts (Yeheskel, O), Jan., 17

Spherical shape
Determining Residual Stress in Spherical Components: A New Application of the Hole-Drilling Method (Montay, G, Cherouat, A, Garnier, C, and Lu, J), Jan., 73

Standards
Toughness Characterization of Fiber-Reinforced Concrete: Which Standard to Use? (Banthia, N and Mindess, S), March, 138

Static cone penetration test
Cone Resistance of Compacted Ash Fill (Trivedi, A and Singh, S), Nov., 429

Steel
The Response of 1CrMoV Rotor Steel to Service-Cycle Thermomechanical Fatigue Testing (Holdsworth, SR, Mazza, E, and Jung, A), July, 255

Strain gage
Three-Dimensional Crack Detection Method for Structures Using Simulated Strain Gages and the Body Force Method (Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura), March, 106

Strain rate
Effect of Loading Schemes on the Depth-Sensing Indentation Tests (Zhang, JM, Xu, KW, and Guelorget, B), Nov., 504

Stress concentration factor
Stress Concentration Factor Formulas Useful for Any Dimensions of Shoulder Fillet in a Flat Test Specimen Under Tension and Bending (Noda, NA and Takase, Y), May, 217

Stress field
Estimation of Stress Field Near a Notch Root of 3-D Structures with a Few Strain Data and the Body Force Method (Yoshimura, T, Harada, T, Noguchi, H, and Yoshimura), May, 184

Stress intensity factor
The Use of an Alternative Method for Fracture Toughness Evaluation on Different Materials (Guardiola, M, Bernal, C, Martinez, R, and Cassanelli, A), Sept., 404

Stress profile
Residual Stress Measurement in Ion-Exchanged Glass by Iterated Birefringence and Etching (Abrams, M, Shen, J, and Green, D), May, 227

Subtraction Correction Factor
Generalized Subtraction Correction Algorithm for Measuring Duct Leakage Using a Blower Door (Katz, M, Witriol, N, and Erinjeri, J), Nov., 421

T

Testing
Testing and Comparison of Various Packages for Mango Distribution (Chonhenchob, V and Singh, SP), Jan., 69

Testing characteristics
Comparative Statistical Analysis of Original and Aged Bituminous Material Viscosity (Divinsky, M), Sept., 396

Thermomechanical fatigue
Characteristics of Macrodeformation Behavior of the Cycling Failure Specimens of a Fe-Cr-Ni Alloy Under In-phase and Out-of-phase Thermomechanical Fatigue (He, Q and Qian, Y), May, 250
The Response of 1CrMoV Rotor Steel to Service-Cycle Thermomechanical Fatigue Testing (Holdsworth, SR, Mazza, E, and Jung, A), July, 255

Time domain reflectometry
Methodology for Determination of Electrical Properties of Soils (Rohini, K and Singh, DN), Jan., 62

U

Ultra-thin white-topping
Mechanistic-Empirical Characterization of Bonding Between Ultra-Thin White-Topping and Asphalt Pavement (Li, S, Li, Y, Way, G, and Noureldin, S), July, 274

Uniaxial tensile test
Mechanical Property Evaluation Using the Small Punch Test (Eskner, M and Sandstrom, R), July, 282

Unloading compliance
An Energy-Based Crack Extension Formulation for Crack Resistance Characterization of Ductile Materials (Chaouadi, R), Nov., 469

UV absorber loss
UV Absorber Permanence and Coating Lifetimes (Pickett, JE), May, 240

V

Viscoelastic
Inverse Equivalent Elastic and Viscoelastic Loading Problems—Analytical and Computational Simulations of Experiments (Hilton, H), Jan., 24

Viscoelastic material
Some Problems in the Measurement of Dynamic Modulus of Viscoelastic Model Materials (Zhou, L and Chen, J), May, 246

Viscoelasticity
Influence of Hysteretic Heating on Asphalt Fatigue Characterization (Lundstrom, R, Ekblad, J, and Isacsson, U), Nov., 484

W

Water deairing system
Development of an Innovative Computer-Controlled Water Deairing System for Hydraulic Testing of Geosynthetics (Aydilek, AH and Kutay, ME), March, 161

Water test methods
Water Testing Natural Rubber Latex Condoms: A Comparison of Surveillance Test Methods (Thomas, LC, Kerr, LN, Andersen, PC, Carter, EJ, and McIlvain, LD), May, 202

Weibull cumulative distribution function
Modeling of Cumulative Mass Loss—Time Curves for Six Erosion Test Methods (Meged, Y), Nov., 450

Weigh-in-motion
Piezoelectric Sensors for Weigh-In-Motion Systems: An Experimental Insight into Edge Effects (Iaquinta, J, Merliot, E, Cottineau, L, and Desroche, J), Nov., 476

White clay
Methodology for Determination of Electrical Properties of Soils (Rohini, K and Singh, DN), Jan., 62